

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims of the application:

Claim 1 (Previously Presented) A method for automatically designing cellular mobile radio telephone networks, wherein, from network-related and space-related reference data including existing planning data of implemented, planned or abstract cellular mobile radio telephone networks or subnetworks and the space-related data of their planning areas, and the space-related data of a new planning area, a design of the cellular mobile radio telephone network or subnetwork for the new planning area is automatically generated by processing the relationships between the space-related reference and the space-related data of the new planning area and application of coordinate and angle transformations to the site coordinates of the base stations and main beam directions of the antennas of the base stations of the reference data.

Claim 2 (Previously Presented) A method according to claim 1, wherein the quality of the network design is assessed by quantifying the relationships between the space-related reference data and the space-related data of the new planning area.

Claim 3 (Previously Presented) A method according to

claim 1, wherein the space-related data of the new planning area are acquired, stored, tested and processed.

Claim 4 (Previously Presented) A method according to claim 1, wherein the space-related data of the new planning area are represented as one or multi-dimensional features and/or parameters and are kept stored in a database.

Claim 5 (Previously Presented) A method according to claim 1, wherein the space-related and network-related reference data are kept stored in a database and are represented as one or multi-dimensional features and/or parameters.

Claim 6 (Previously Presented) A method according to claim 1, wherein, for a mobile radio telephone network or subnetwork (N1) to be planned on a geographic area (1) a real or abstract mobile radio telephone network or subnetwork (N2) on a real or abstract geographic area (6) is changed in the space-related parameters, site coordinates and antenna main beam directions and on the geographic area (1) is substituted in the subnetwork (N1) to be planned by coordinate transformation of the geographic longitude, latitude and rotation with respect to the zero meridian at the precise instant when the features of the space-related data of the geographic areas (1) and (6) are equal or are said to be equal in accordance with a particular criterion.

Claim 7 (Previously Presented) A method for automatically generating a design for a cellular mobile radio telephone network using network-related and space-related reference data of existing implemented, planned, or abstract cellular mobile radio telephone networks or subnetworks, and space-related data of a new planning area, comprising the steps of:

processing relationships between the space-related reference data and space-related data of the new planning area; and

applying coordinate and angle transformations to site coordinates of base stations of the reference data and to main beam directions of antennas of the base stations of the reference data.

Claim 8 (New) A method for automatically generating a design for a planned second cellular mobile radio telephone network using network-related and space-related reference data of a geographical area of an existing first implemented, planned, or abstract cellular mobile radio telephone network or subnetwork, and space-related data of a geographical area of a new planning area, comprising the steps of:

processing relationships between the space-related reference data and space-related planning data; and

applying coordinate and angle transformations to site coordinates of base stations of the reference data and to main beam directions of antennas of the base stations of the reference data, wherein

space-related parameters, site coordinates, and antenna main beam directions of the existing first network or subnetwork are changed; and

geographic longitude, latitude, and rotation with respect to a zero meridian are substituted in the planned second network or subnetwork by coordinate transformation at an instant when the features of the space-related reference data and the space-related planning data are equal or are equal in accordance with a particular criterion.

Claim 9 (New) A method for automatically generating a design for a planned second cellular mobile radio telephone network using network-related and space-related reference data of existing first implemented, planned, or abstract cellular mobile radio telephone networks or subnetworks in a reference area, and space-related data of a new planning area, comprising the steps of:

calculating features of the space-related reference data and the space-related planning data which are represented as one-dimensional or multi-dimensional features or parameters;

performing similarity calculation of the multi-dimensional features of the reference area and the planning area;

mapping sites of base stations of the reference area onto the planning area by coordinate transformation of the reference area base station sites into geographical longitude, latitude, and rotation relative to a zero meridian; and

transforming angles of main beam directions of antennas

of the base stations for rotation relative to the zero
meridian.